

# World Space Agencies

## INTRODUCTORY TERMS

### ❖ What is Astronomy?

- Astronomy is the scientific study of celestial objects (stars, planets etc.).

### ❖ What is Space Agency?

- Space agency is a government agency engaged in activities related to outer space and space exploration.

### ❖ What is Space?

- In astronomy, space is the vast 3-dimensional region that begins where the earth's atmosphere ends.

### ❖ **Spacecraft:** A vehicle that travels in space.

### ❖ **Astronaut:** A person who travels in a spacecraft.

### ❖ An astronaut of the Soviet or Russian space program is called **Cosmonaut**.

## Important Dates & Days

- World Space Week : 4 to 10 October
- The 2021 theme of World Space Week : “Women in Space.”
- International Day of Human Space Flight : 12 April
- 12 April 1961 was the date of the first human space flight, carried out by Yuri Gagarin, a Soviet citizen.
- India celebrates National Space Day on the first Friday in May.

## America

<u>Sl. No.</u>	<u>Country</u>	<u>Space Agency</u>	<u>Headquarters</u>
1.	United States	National Aeronautics and Space Administration (NASA)	Washington, D.C.
2.	Mexico	Mexican Space Agency (AEM)	Mexico City
3.	Brazil	Brazilian Space Agency (AEB)	Brasília
4.	Canada	Canadian Space Agency (CSA)	John H. Chapman Space Centre, Quebec

## Asia

<u>Sl. No.</u>	<u>Country</u>	<u>Space Agency</u>	<u>Headquarters</u>
5.	India	Indian Space Research Organisation (ISRO)	Bengaluru, Karnataka
6.	Japan	Japan Aerospace Exploration Agency (JAXA)	Tokyo, Japan
7.	Israel	Israel Space Agency (ISA)	Tel Aviv, Israel
8.	China	China National Space Administration (CNSA)	Beijing, China
9.	Pakistan	Space & Upper Atmosphere Research Commission (SUPARCO)	Karachi, Pakistan
10.	United Arab Emirates	United Arab Emirates Space Agency (UAESA)	Abu Dhabi, UAE
11.	South Korea	Korea Aerospace Research Institute (KARI)	Daejeon, South Korea
12.	South Korea	Korea Astronomy and Space Science Institute (KASI)	Daejeon, South Korea
13.	North Korea	National Aerospace Development Administration (NADA)	Pyongyang
14.	Saudi Arabia	Saudi Space Commission	Riyadh, Saudi Arabia

## Europe

<u>Sl. No.</u>	<u>Country</u>	<u>Space Agency</u>	<u>Headquarters</u>
15.	Italy	Italian Space Agency	Rome, Italy
16.	The Netherlands	Netherlands Space Office (NSO)	The Netherlands
17.	France	National Centre for Space Studies or Centre national d'études spatiales (CNES)	Paris, France
18.	Russian Federation	State Space Corporation "Roscosmos"	Moscow, Russia
19.	United Kingdom	United Kingdom Space Agency (UKSA)	Swindon, Wiltshire
20.	Sweden	Swedish National Space Agency (SNSA)	Solna, Sweden
21.	Belgium	Royal Belgian Institute for Space Aeronomy (BIRA-IASB)	Brussels, Belgium

## Others

<u>Sl. No.</u>	<u>Country</u>	<u>Space Agency</u>	<u>Headquarters</u>
22.	Australia	Australian Space Agency	Adelaide, South Australia
23.	South Africa	South African National Space Agency (SANSA)	Pretoria

## Indian Space Research Organisation

- Established in :- 15<sup>th</sup> August, 1969
- Founder :- Vikram Sarabhai
- Headquarters :- Bengaluru, Karnataka
- Chairman :- Shri S. Somanath
- Vikram Sarabhai is internationally regarded as the Father of the Indian Space Program.



## International Space Station

- It is a modular space station (habitable artificial satellite) in low Earth orbit (LEO).
- It involves five participating space agencies:
  1. NASA (United States),
  2. Roscosmos (Russia),
  3. JAXA (Japan),
  4. ESA (Europe), and
  5. CSA (Canada)



### Purpose

- It serves as a microgravity and space environment research laboratory.
- Here scientific research is conducted in astrobiology, astronomy, meteorology, physics and other fields.
- It is suited for testing the spacecraft systems and equipment required for possible future long-duration missions to the Moon and Mars.



- The International Space Station (ISS) is a multi-nation construction project that is the largest single structure humans ever put into space.
- The first module of the ISS, *Zarya*, was launched on 20 November 1998 (on an Russian rocket).
- Its main construction was completed between 1998 and 2011.
- The first long-term residents arrived at ISS on 2 November, 2000.
- 251 individuals from 19 countries have visited the International Space Station (December, 2021), mostly from United States (155 people).
- According to NASA's budget estimates, the ISS's re-entry into the Earth's atmosphere will take place in January, 2031.
- Mission control will first lower its altitude and the spacecraft will begin to descent into the "South Pacific Oceanic Uninhabited Area" (SPOUA) in an area known as Point Nemo.

## National Aeronautics and Space Administration

- Establishment :- 1958
- Founder :- Dwight D. Eisenhower
- Headquarters :- Washington, D.C., United States
- Administrator :- Bill Nelson



## European Space Agency

- It is an intergovernmental organisation of 22 member states dedicated to the exploration of space.
- Established in 1975
- Headquarter: Paris, France
- Administrator:- Josef **Aschbacher**
- Members: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, and the United Kingdom.



European Space Agency

## Canadian Space Agency

- Headquarters: - John H. Chapman Space Centre, Quebec
- President :- Lisa Campbell



Canada



## Roscosmos

- Headquarters :- Moscow, Russia
- Administrator :- Dmitry Rogozin

**Japan Aerospace Exploration Agency**

Headquarters :- Tokyo, Japan

Administrator :- Hiroshi Yamakawa



# Parcham Classes